

# Radiation exposures during medical x-ray procedures

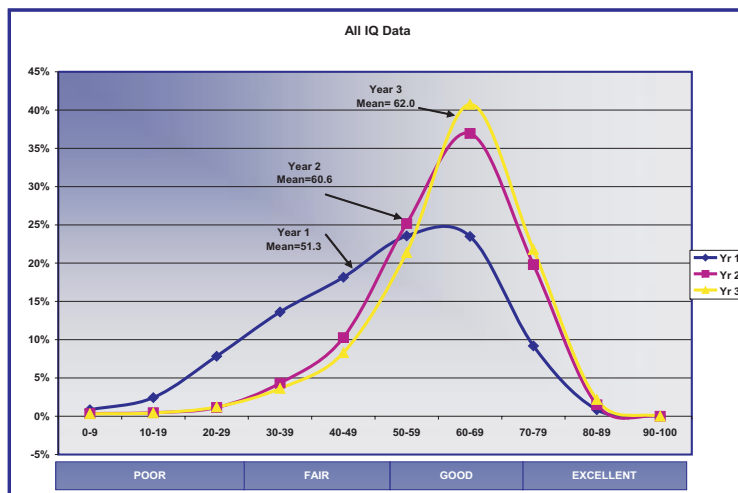
## Background

There is some radiation exposure during medical x-ray procedures. In recent years, technological improvements have resulted in significant reductions in these exposures.

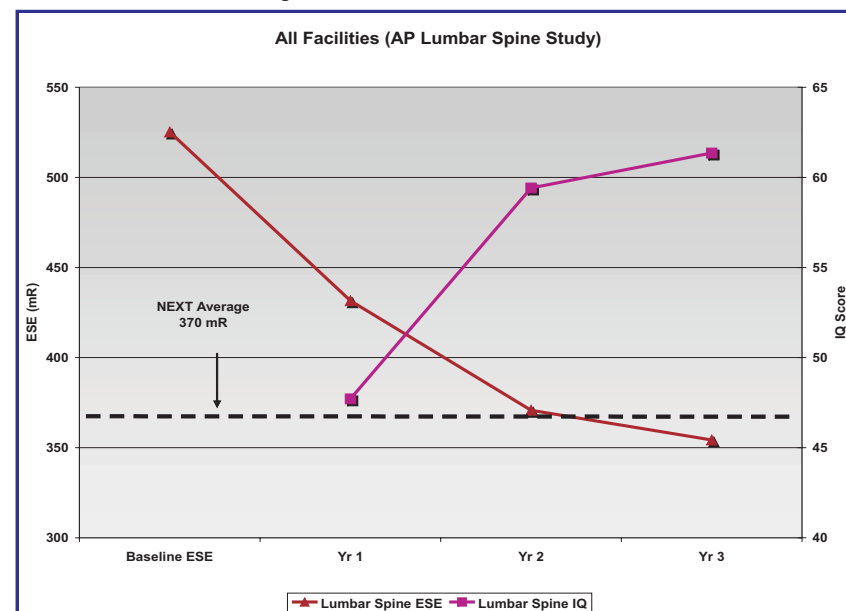
## Status and Trends

With the goal of improving performance, quality-assurance programs applying to medical x-ray procedures and equipment have been mandatory in New Jersey since January 2001. During the last four years, facilities performing medical diagnostic x-rays in New Jersey have reduced patients' radiation exposure 33 to 63 percent. In addition, medical x-ray image quality improved 21 percent during the same time period. These improvements benefit New Jersey patients by reducing their risks from exposure to ionizing radiation and by providing physicians with better diagnostic images for identifying and treating disease. (See "Image Quality Scores" and "All Facilities..." below). The first chart shows the steady improvement in diagnostic image quality

scores over a three-year period. The percentage of facilities having good or excellent image quality scores increased from 53 percent of all facilities in 2001 to 87 percent of all facilities in 2003. Poor image scores decreased from 11 percent of all facilities in 2001 to 2 percent of facilities in 2003.



The second chart shows that radiation exposure for lumbar spine x-rays (Entrance Skin Exposure-ESE) has decreased each year since 2000, while the average image quality score (IQ) has increased each year since 2000. This data includes all hospitals, medical facilities and chiropractors performing x-ray studies of the lumbosacral spine. The dotted black line represents the national average radiation exposure level for lumbosacral spine. New Jersey has decreased its average radiation exposure for this frequently performed procedure below the national average.



## More Information

Material in this section was made available by the Division of Radiation Protection and Release Prevention. For more information, visit [www.nj.gov/dep/rpp/index.htm](http://www.nj.gov/dep/rpp/index.htm).